

ABSTRACT

PT ULS is textile company located in Bandung, Indonesia. PT ULS manufacturing textile such as yarn and fabrics. The company is using machine called Murata 310A because it has high production amount among other machine, so the machine must have a good performance and work in optimally. For that, machine Murata 310A need to do maintenance activity.

Method used is Reliability, Availability, Maintainability (RAM) to determine the value Reliability, Availability, Maintainability on critical system of machine and knowing the value of Performance Indicator on critical system of Murata 310A machine. Another method used is the method of Overall Equipment Effectiveness (OEE) to determine the performance and the effectiveness of the machine. In OEE calculation to determine the value of availability, performance rate, and the rate of quality product from a machine. Further examination of the Six Big Losses factor to determine what factors lead to low OEE value.

From the results of data processing using the Reliability, Availability and Maintainability Analysis using Reliability Block Diagram based on analytical approach, at the time of 112 hours, the system has a value of Reliability (34,84%). Average value of Maintainability system at $t = 14$ hours was 77 %. Values of Inherent Availability is 97% and the value of Operational Availability is 86%. Based on the evaluations that have been done using the world class maintenance Key Performance Indicator, the leading of availability has reached the target of a given indicator whereas the lagging of availability no has reached the target of a given indicator

For the calculation of OEE values on Murata 310A machines amounted to 41,69%. The value of the standards set by the Japan Institute of Plant Maintenance (JIPM) by 85%. The company can anticipate from the Six Big Losses that the most influential factor to the decline in the effectiveness of the engine is idle and minor stoppages factor amounted to 26,4% of the total losses.

Keywords : Availability, Key Performance Indicator, Maintainability, Reliability,, Overall Equipment Effectiveness (OEE), Six Big Losses